REMARKS

Support for the amendments to claim 1 can be found, for example, at Example 1, Figs. 2 A and B and page 16 line 29 to page 17 line 6 of the specification. No new matter has been added.

Rejections under 35 USC §112

Claims 1-5 and 12-25 are rejected under 35 USC §112, second paragraph. The Examiner alleges that the claims contain an improper hybrid combination because the preamble is directed to a molding while the body of the claim is related to a combination of a molding and a cladding material.

Applicants respectfully disagree. The function of the preamble is to set forth the general technical environment of the invention. In this case the invention relates to moldings. Based on the current claim lanquage, one skilled in the art would easily recognize that the molding has a cladding. It is not necessary that the preamble recite each feature of the molding. Furthermore, there is no statutory requirement that the preamble contain each element of the body of the claim. However, in the interest of furthering prosecution the preamble has been amended to recite "clad".

Thus, it is respectfully requested that the rejection under 35 USC §112 be withdrawn.

Rejections under 35 USC §102/103

Claims 1, 2, 4, 5, 14, 16, 17, 19, 21, 24 and 25 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by EP 838 257. Claims 3, 15, and 18 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over EP 838 257, and further in view of WO 98/58253. Claims 12 and 13 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over EP 838 257, and further in view of Dhingra et al (US 6,054,052). Claim 20 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over EP 838 257, and further in view of Li et al (US 7,125,488). Claims 22 and 23 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over EP

838 257, and further in view of Ohno et al (US 4,483,940). Claims 1-5, 14-19, 21, 24 and 25 stand rejected under 35 U.S.C. 102/103 as allegedly being anticipated by or obvious over EP 838 257, and further in view of WO 98/58253. Claims 12 and 13 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over WO 98/58253, in view of Walter et al (US 7,250,214) and further in view of Dhingra et al (US 6,054,052). Claim 20 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over WO 98/58253, in view of Walter et al (US 7,250,214) and further in view of Li et al (US 7,125,448). Claims 22 and 23 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over WO 98/58253, in view of Walter et al (US 7,250,214) and further in view of Ohno et al (US 4,483,940). Claims 1-3, 5, 14-19, 21, 24 and 25 stand rejected under under 35 U.S.C. 102/103 as anticipated by or obvious over Lubda et al. (US 2003/0172674). The rejections are respectfully traversed.

On page 3 of the Office Action the Examiner alleges that "having one side longer than the other(s) and having a cladding on the long side" is a product by process limitation. That is not correct. The recitation of "having one side longer than the other(s) and having a cladding on the long side" is a physical distinction of the clad molding itself and not a process step as alleged. Furthermore, as discussed throughout the specification a moulding that is coated with at least one organic polymer which is physisorbed or chemisorbed on the inorganic moulding is not only very dense but is also is stable against NaOH. The resulting moulding exhibits distinct differences from the prior art mouldings.

The inner surface of the moldings according to the present invention exhibits a very dense coating. As disclosed in the specification (Example 2) at page 17, line 24 to page 18, line 16, for example, this dense coating is achieved by the introduction of the coating solution into the monolithic material under pressure and by a decrease of temperature. The decrease of temperature induces a precipitation onto the moulding under suitable conditions. The details of this coating are described on pages 9 -11 of the present application. The dense precipitated coating exhibits exceptional stability against alkaline attack. See Example 1, for example, which compares the properties of a C-18

functionalized moulding with a polymer coated moulding according to the invention. Table 1, shows the remaining carbon content of the mouldings and their condition after treatment with sodium hydroxide solution for various times. As can be seen the C-18 functionalized mouldings lose a considerable amount of weight and thus also carbon modification in sodium hydroxide solution and are in some cases destroyed or even completely dissolved. By contrast, the polymer coated samples according to the invention exhibit good stability to the sodium hydroxide solution. Furthermore, as can be seen in Fig. 2 A and B, scanning electron microscope pictures show there is no difference between the coated and uncoated mouldings with respect to morphology. The macropore structure is maintained and a dense coating of pore surfaces is achieved. Thus, there are significant unobvious differences between the claimed product and the prior art products.

Dell et al. (EP 838 257) teaches a membrane-coated substrate and method for forming the membrane coating on the substrate. In ' 257 the coating polymers are applied to the inner surfaces of the moulding under pressure and in a softened state. The resulting porous structure of the monolithic moulding doesn't remain.

Dell does not teach or suggest a moulding having one side longer than the other(s) and having a cladding on the long side. Nor does Dell teach or suggest a moulding that is coated with at least one organic polymer, which is physisorbed or chemisorbed on the inorganic moulding. Dell is particularly silent regarding a coating that is stable against NaOH and which retains the porosity of the moulding after coating.

Cabrerra et al (WO98/58253- equivalent to US 6,398,962) relates to monolithic sorbents used for preparative separation processes. In '962 porous materials are described, which are modified by functional groups. These groups don't build a dense protective layer on the inner pore surfaces of the mouldings. If the monomer or oligomer containing solution is pumped through the porous moulding only a statistical allocation on the inner surfaces takes place. The '962 reference does not disclose or suggest precipitating the coating solution by lowering the temperature. As discussed

above, this results in a dense inner coating that is stable against alkaline solutions and retains the pore structure.

Thus, like Dell above, '962 does not teach or suggest a moulding having one side longer than the other(s) and having a cladding on the long side. Dell is also silent regarding a moulding that is coated with at least one organic polymer that is physisorbed or chemisorbed on the inorganic moulding. Such a coating would be stable against NaOH and the pore structure of the moulding would remain after coating.

Lubda (US 2003/0172674) discloses a monolithic moulding. The surface may be modified with epoxides. The modified moulding may be coated with a hydrophilic polymer layers. Like, Dell and Cabrera discussed above, Lubda does not teach or suggest a moulding that is coated with at least one organic polymer that is physisorbed or chemisorbed on the inorganic moulding. Lubda is also silent regarding precipitating the coating solution by lowering the temperature, which results in a moulding having a dense coating that is stable against NaOH and a pore structure.

Ohno et al (US 4,483,940) teaches a ceramic honeycomb carrier of monolithic construction that is coated with 2-hydroxyethyl methacrylate. See column 4, lines 10-20. Like Lubda, Dell and Cabrera discussed above, Ohno is silent regarding lowering the temperature of the coating solution which results in a moulding having a distinct dense coating that is resistant to alkaline attack and retains its pore structure.

The secondary references do not cure the deficiencies of the primary references discussed above.

Dhingra et al (US 6,054,052) is relied upon for teaching teaches a porous inorganic sorbent in the form of a flat membrane having a thickness 0.02 to 1000 microns.

Li et al (US 7,125,488) is relied upon for teaching a silica monolith having a surface modified with at least two silanes wherein one silane is an endcapping silane.

Walter et al (US 7,250,214) is relied upon for teaching a porous SiO_2 body having an organic functionality on both the internal and external surface and a polymeric coating.

See column 11, lines 55-60, and column 12, lines 50-55.

All of the cited references are all silent with regards to an organic polymer coating that is physisorbed or chemisorbed on the inorganic moulding. They are particularly silent regarding precipitating the coating solution by lowering the temperature resulting in a dense coating. Thus, none of the cited references disclose or suggest products showing inner coatings that would be stable against a strong alkaline solution. The references are particularly silent regarding a coated moulding that retains pore structure. Furthermore, the primary references Cabrera '962 and Dell EP '257 are silent regarding a moulding that is clad on the long side.

Thus, it is respectfully requested that the rejections under 35 USC §102 and §103 be withdrawn.

No fee is believed to be due with this response, however, the Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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